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Evaluation of a Community-Based Health Promotion Program with Online Off-Line Combination: The Effect of an Online Diet Record System on Self-rated Achievement

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Abstract

The aim of this study is to clarify the effect of e-health community health promotion program, which consists of both online diet record system and off-line health activities. 49 participants are surveyed concerning self-rated sense of understanding and sense of control about calorie intake, nutrition balance, and physical activity along with basic information, internet usage and lifestyle habit are surveyed during 2009-2011. Self-rated sense of achievement regarding dietary understanding and dietary sense of control significantly increased in a group that utilized the online diet record system. Further analysis shows that the usage of the diet record system affects the self-rated sense of achievement while neither age, sex, answers of the preliminary questionnaire nor session participation had any effect.

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Keywords: health promotion; local community; internet; online diet record; older people

1. Introduction

In Japan, 33 million people (26.0% of national population) were over age 65 in 2014¹. In such an aging society, which is brought about by the increase of life expectancy and decrease of birthrate, expanding “healthy life

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expectancy” will become important toward maintaining a sustainable and vital society as well as for decreasing medical costs. Senior people’s commitment to local activities is increasing every year and over 50% of over age 60 participate in some kind of local activity. Many researchers suggest that community networking plays an important factor for the community members’ health².

At the same time, 75.2% of those between age 60 and 69 and 50.2% of those between age 70 and 79 use the internet from the survey of 2014, a 49.2 point and 42.1 point increase in comparison to the survey held in 2002³.

This suggests that both community networking and ICT have great potential for general health promotion not only in the aspect of mass reachability but also for peer support among community members. Our research validates this hypothesis, in a trial for a health promotion program which consists both of web-based online activities and local community-based off-line activities. We assume combining both online and off-line activities will help keep the motivation for being healthy in a complementary style.

2. Related Work

Studies report considerable benefit of internet-based interventions increasing physical activity in the community^{4,5}, promoting weight loss⁶, and managing chronic diseases such as asthma⁷ and diabetes⁸. Computer-tailored education for physical activity and dietary behaviour have been found to be effective⁹. However, there is very little research reporting about the application of ICT to local community-based health promotion programs. The authors conducted a literature survey through PubMed. 5433 articles were hit through search with “health promotion” and “community”, however only 71 articles were retrieved through search with “health promotion”, “community”, and “internet”. Among these 71 articles, 11 reported the actual interventions and the results of health promotion programs done in the local community. Most of the research report the effectiveness of learning, communication and information acquisition through the internet for behavioral change¹⁰⁻¹⁹. Some programs also have interactive contents such as inputting pedometer counts or meals^{20,12,18}. Two researches targeted older people which reported the potential feasibility and effectiveness of internet-based health promotion for older people^{11,14}.

3. The e-Health Community Program

3.1. An Overview

Improvement of daily dietary habit and sustained physical activities are effective for health maintenance and prevention of lifestyle diseases, however, left to individual effort only it is not easy to change a lifestyle which is the result of years of daily life^{21,22}. The “e-health community” is a health promotion program for senior people, which includes both online and off-line activities. The aim of our research is to develop a citizen centric health community through this program for sustainable citizens’ health promotion.

The e-health community does not employ a “traditional” medical-centric model, that is, a model to improve citizen’s health by medical staffs’ direct intervention. Our approach is citizen-centric, that is, a model that encourages self realization of both self and community health by increasing the members’ awareness and understanding regarding their individual health and that of the community. To realize this approach, we drive this program by collaborating with three non-profit organizations of senior people.

The e-health community provides some tools and knowledge to understand one’s lifestyle for oneself and support health awareness for both individual and community: 1) online diet record system, 2) off-line physical activity and cooking sessions on a monthly basis.

3.2. An Implementing Body

The concept of this program was first designed by the authors. However, considering that this program is “community-centered” and that the program should be run by citizens in the future for sustainable implementation, some citizens’ groups were invited to operate this program cooperatively. Although we started this program with the primary hosting of Keio University, we have gradually moved the balance from the university to the citizen’s groups. By 2010, the primary host has moved to one of the citizens’ group called the Shonan Fujisawa Senior network.

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